Response to the Final Office Action dated July 15, 2005

Serial No. 10/624,361 filed on July 22, 2003

Art Unit: 3671

Page 2

In The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1-21 Cancelled.

5

6

7

8

9

10

11

12

- 1 22. (Previously Presented) A method of tilling soil comprising:
- 2 (a) pulling a seedbed preparation implement in a draft direction;
- 3 (b) during the step (a), plowing the soil using a plurality of plow shanks 4 mounted on a mainframe of said seedbed preparation implement;
 - (c) during the step (a), cutting and turning the soil using a plurality of rotating discs of a disc gang supported by a main beam, said main beam being pivotally connected with respect to said mainframe, said discs rotating about a common axis that extends at a gang angle relative to a perpendicular to said draft direction, and
 - (d) adjusting said gang angle by moving said disc gang relative to said mainframe, the adjustment being infinite through a designated range of at least 3°, the adjusting step further comprising actuating an actuator extending wholly between said main beam and said mainframe.
- 1 23. (Original) The method as recited in claim 22, wherein the disc gang angle is
- 2 infinitely adjustable within at least a range extending from about 5° to about 10°.
- 1 24. Cancelled.
- 1 25. (Currently Amended) The method as recited in claim 22, wherein the adjusting 2 step comprises:
- i. pivoting a location on said main beam about a vertical axis; and
- 4 ii. sliding a pin in an elongated slot on said mainframe, said pin disposed at a
- 5 | location outwardly disposed from said a first pivoting location relative to an axis
- 6 extending centrally through said mainframe along said draft direction.

Response to the Final Office Action dated July 15, 2005

Serial No. 10/624,361 filed on July 22, 2003

Art Unit: 3671

Page 3

- 1 26. (Previously Presented) The method as recited in claim 22, wherein said discs
- 2 are mounted on a disc support beam that is connected to said main beam and that moves
- 3 with said main beam during gang angle adjustment, and further comprising raising and
- 4 lowering said disc support beam relative to said main beam to adjust a cutting depth of
- 5 said discs.

2

3

- 1 27. (Previously Presented) A method of tilling soil, comprising:
 - (a) pulling a seedbed preparation implement in a draft direction;
 - (b) during the step (a), plowing the soil using a plurality of plow shanks
- 4 mounted on a mainframe of said seedbed preparation implement;
- 5 (c) during the step (a), cutting and turning the soil using a plurality of
- 6 rotating discs of a disc gang, said disc gang including a main beam that is coupled to a
- 7 front portion of said mainframe, said main beam being angularly offset with respect to
- 8 said draft direction, and a disc support beam that is located in front of said main beam
- 9 and that is coupled to said main beam so as to move therewith, wherein said discs are
- directly connected to said disc support beam and only connected to said main beam via
- at least one support arm extending between said disc support beam and said main beam,
- said discs being supported so as to permit said discs to rotate about a common axis that
- extends at a gang angle relative to a perpendicular to said draft direction; and
- 14 (d) adjusting said gang angle by actuating an actuator so as to pivot
- said main beam about a vertical axis and thereby to cause a pin coupled to said main
- beam to slide along an unsegmented guide in a plate attached to said frame.
- 1 28. (Original) The method as recited in claim 27, further comprising raising and
- 2 lowering said disc support beam relative to said main beam to adjust a cutting depth of
- 3 said discs.
- 1 29. (Previously Presented) The method as recited in claim 22, wherein said
- 2 mainframe is directly supported by ground-engaging wheels.

Response to the Final Office Action dated July 15, 2005

Serial No. 10/624,361 filed on July 22, 2003

Art Unit: 3671

Page 4

- 1 30. (Previously Presented) The method as recited in claim 22, wherein said
- 2 mainframe is connected between a front disc harrow and a rear disc harrow, the front
- 3 disc harrow comprising the disc gang.
- 1 31. (Previously Presented) The method as recited in claim 22, wherein the disc
- 2 gang is disposed forward of said mainframe with respect to said draft direction.
- 1 32. (Currently Amended) The method as recited in claim 25, wherein said first
- 2 | pivoting portion location is at comprises an inner end portion of the main beam.
- 1 33. (Previously Presented) The method as recited in claim 25, wherein said pin is
- 2 located at an outer end portion of the main beam.
- 1 34. (Currently Amended) The method as recited in claim 27, wherein said
- 2 | mainframe further comprises <u>a</u> support structure pivotably connected to the disc gang.
- 1 35. (Previously Presented) The method as recited in claim 27, wherein said
- 2 mainframe is directly supported by ground-engaging wheels.
- 1 36. (Previously Presented) The method as recited in claim 27, wherein said
- 2 mainframe is connected between a front disc harrow and a rear disc harrow, the front
- 3 disc harrow comprising the disc gang.
- 4 37. (Currently Amended) A method of tilling soil, comprising:
- 5 (a) pulling a seedbed preparation implement in a draft direction;
- 6 (b) during the step (a), plowing the soil using a plurality of plow
- 7 shanks mounted on a mainframe of said seedbed preparation implement;
- 8 (c) during the step (a), cutting and turning the soil using a plurality
- 9 of rotating discs of a pair of adjacent disc gangs, each disc gang including a support
- structure pivotably connected to said mainframe so as to permit each disc gang to rotate
- its discs about a common axis that extends at a gang angle relative to a perpendicular to
- 12 said draft direction; and
- 13 (d) adjusting said gang angle of said adjacent disc gangs so as to
- 14 pivot said support structure about a vertical axis to thereby bring said adjacent disc
- 15 gangs into alignment, wherein said support structure comprises a main beam that is

Response to the Final Office Action dated July 15, 2005 Serial No. 10/624,361 filed on July 22, 2003 Art Unit: 3671

Page 5

- 16 | coupled to a front portion of said mainframe and a disc support beam that is located in
- 17 front of said main beam that is coupled to said main beam so as to move therewith.
 - 1 38. Cancelled.